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The Motivation Problem in American High Schools

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Abstract

American high school students devote much less time and energy to their studies than the students of other nations. The cause of the lack of motivation is the lack of rewards for studying hard and for taking rigorous courses. This occurs for four reasons. First, the u.S. economy fails to give academic achievement its due reward in the labor market and rewards instead credentials that signify time spent, rather than competencies acquired. In most other countries credentials are more closely related to competencies obtained, so school achievement is a more important determinants of prestige and income as an adult than they are in the U.S.

The second cause is the zero sum nature of academic competition and resulting peer pressure against studying hard. The most important signals of one's achievement--rank in class and GPA--are indicators of one's ranking relative to close friends not measures of performance on an absolute scale in the way a scout merit badge is. Since studying hard makes things worse for friends, the peer group pressures everyone to take it easy.

The third reason is the almost total absence of school sponsored recognition of the academic achievements of students who are not at the very top of their class. Most students learn very early that they have no realistic chance of getting one of these prizes and their reaction is often to denigrate both the reward and the achievement it honors and to honor instead other forms of achievement --ego athletics, being cool, being popular--which offer them better chances of success.

The fourth reason is the admissions criteria of the nation's better colleges and universities. In the United States these decisions are based almost entirely on (a) scores on the Scholastic Aptitude Test, a test which does not assess achievement in the science, history and math courses taken in high school and (b) high school class rank and GPA, a criterion that generates zero sum competition among classmates. In Japan and most of Europe, admission to the better universities and into the most selective programs of study are based largely on the student's performance on a battery of achievement exams taken at the end of secondary school (eg. "A" levels in the UK and the Baccalaureate in France).

The paper conclude with a discussion of a variety of reforms that will strengthen incentives to study and generate parental pressure on local school administrators for higher standards and better teaching.

Keywords

CAHRS, ILR, center, human resource, job, worker, advanced, labor market, American, student, performance, employment, school, role, employ, vocational, education, United States, youth, risk, work, job, training, occupation, college, examination, school, student, learning, economic

Comments

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THE MOTIVATION PROBLEM IN AMERICAN HIGH SCHOOLS

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ABSTRACT

American high school students devote much less time and energy to their studies than the students of other nations. The cause of the lack of motivation is the lack of rewards for studying hard and for taking rigorous courses. This occurs for four reasons. First, the U.S. economy fails to give academic achievement its due reward in the labor market and rewards instead credentials that signify time spent, rather than competencies acquired. In most other countries credentials are more closely related to competencies obtained, so school achievement is a more important determinants of prestige and income as an adult than they are in the U.S.

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9/16/88

THE MOTIVATION PROBLEM IN AMERICAN HIGH SCHOOLS

"All too often docile, compliant, and without initiative." This is how Theodore Sizer (1984) characterized American high school students at the end of his massive two year study of high schools. John Goodlad also concluded: **"The extraordinary degree of student passivity stands out"** (1984). When teachers are asked what they feel are the most important problems in education, more than 40% respond, "lack of interest by students".

Studies of time use and time on task in high school show that students actively engage in a learning activity for only about half the time they are scheduled to be in school. Absence rates of 15 percent or more are common. Even when students are in class, the teacher and/or students are on task only part of the time. A study of high schools in Chicago found that public schools with high-achieving students averaged about 75 percent of class time for actual instruction; for schools with low achieving students, the average was 51 percent of class time (Frederick 1977). Overall, 46.5 percent of the potential learning time was lost due to absence, lateness, and inattention (Frederick 1979). Other studies have found that for reading and math instruction the average engagement rate is about 75 percent (Fischer et al., 1978; Klein, Tyle, and Wright 1979; Goodlad 1983). For vocational classes it is about 56 percent (Halasz and Behm 1983). When absences, nonclass time, and nonengaged class time are combined, less than half of the scheduled time at school is used for learning.

In 1980, high school students spent an average of 3.5 hours per week on homework. When homework is added to engaged time at school, the total time devoted to study, instruction, and practice is only 18-22 hours per week -- between 15 and 20 percent of the student's waking hours during the school year. By way of comparison, the typical senior spent 10 hours per week in a part-time job and about 25 hours per week watching television. Thus, TV occupies as much of an American adolescents time as learning. Students in other nations spend much less time glued to the tube. Austrian students watch 68 percent less, Swiss students watch 60 percent less, and Canadian students watch 44 percent less. (OECD, Table 18.1, 1986)

The lack of student interest makes it difficult for teachers to be demanding. As Theodore Sizer has observed, "A lot of the honors students

aren't questers. They dodge the hard problems, the hard courses, to keep their averages up."(p. 53) Teachers find it difficult to escape being infected by the lassitude. The students can be cruel if they are not entertained or if they perceive the work load to be too heavy. Sizer's description of Ms. Shiffe's class, was strikingly similar to one of the classes I visited in my research:

> Even while the names of living things poured out of Shiffe's lecture, no one was taking notes. She wanted the students to know these names. They did not want to know them and were not going to learn them. Apparently no outside threat--flunking, for example--affected the students. Shiffe did her thing, the students chattered on, even in the presence of a visitor....Their common front of uninterest probably made examinations moot. Shiffe could not flunk them all, and if their performance was uniformly shoddy, she would have to pass them all. Her desperation was as obvious as the students cruelty toward her."(p157-158)

How does a teacher avoid this treatment? Sizer's description of Mr. Brody's class provides one example.

> He signaled to the students what the minima, the few questions for a test, were; all tenth and eleventh-graders could master these with absurdly little difficulty. The youngsters picked up the signal and kept their part of the bargain by being friendly and orderly. They did not push Brody, and he did not push them. The classroom was tranquil and bland. By my watch, over a third of the time was spent on matters other than history, and two-thirds of the classes ostensibly devoted to the subject were undemanding. Brody's room was quiet, and his students liked him. No wonder he had the esteem of the principal who valued orderliness and good rapport between students and staff. Brody and his class had agreement, all right, agreement that reduced the efforts of both students and teacher to an irreducible and pathetic minimum.(p. 156)

Some teachers are able to overcome the obstacles and induce students to undertake tough learning tasks. But for most mortals the lassitude of the students is too demoralizing. Everyone in the system recognizes that there is a problem, but each group fixes blame on someone else. The teachers blame the parents, the students or the administrators. The students and parents tend to blame the teachers. As one student put it:

> As it stands now, there is an unending, ever increasing cyclic problem. Teacher and administrator disinterest, apathy, and their lack of dedication results in students becoming even more unmotivated and docile, which in turn allows teachers to be less interested and dedicated. If students don't care, why should teachers? If teachers don't care, why should the students (Krista 1987).

Yes, it is a classic chicken versus egg problem. We assign teachers the responsibility for setting high standards but we do not give them any effective means except the force of their own personality for inducing student acceptance of the academic goals of the classroom. Most students view the costs of studying hard as much greater than the benefits, so the peer group pressures the teacher to go easy. All too often teachers are forced to compromise their academic demands by their inability to induce the bulk of the class to accept them as reasonable and legitimate. In the current institutional environment, it is highly unlikely that it will be possible to attract enough gifted teachers to solve the problems described above.

Student apathy and student motivation are not the whole of the problem. Parental apathy and parental motivation should also concern us. A comparative study of education in Taiwan, Japan and the U.S. shows that even though American children were learning the least in school, American parents were the most satisfied with the performance of their local schools (Stevenson, Lee and Stigler 1986). Why do Japanese and Taiwanese parents hold their children and schools to a higher standard than American parents?

The U.S. lag in mathematics was revealed by the First International Mathematics Study in 1967. Test scores turned down in 1968. Why did it take until 1981 for a major educational reform movement to get underway? Thus the problem of apathy and motivation is as much a societal problem as it is a parental, a teacher or a student problem.

I. REASONS FOR THE APATHY

The fundamental cause of the apathy and motivation problem is the way we recognize and reinforce student effort and achievement. During the 1960's and 1970's we adopted practices and developed institutions which hid from ourselves our failure to teach, which protected adolescents from the consequences of failing to learn, and which prevented many of those who did learn from reaping the fruits of their labor. The problem is that while there are benefits to staying in school, most students do not benefit very much from working hard while in school. The lack of incentives for effort is a consequence of three phenomena:

* The labor market fails to reward effort and achievement in high school.

* The peer group actively discourages academic effort.

* Admission to selective colleges is based on class rank, grades and aptitude test which do not assess the high school curriculum not on the student's achievement defined relative to an external standard.

1.1 The Absence of Major Economic Rewards for Effort in High School

The educational decisions of students are significantly influenced by the costs (in money, time and psychological effort) and benefits (praise, prestige, employment, wage rates, and job satisfaction) that result. Any number of empirical studies confirm this.[1] When asked why they work hard in school and/or why they care about grades, college-bound students typically respond, "to get into college" or "to get into a good college." For students who plan to look for a job immediately after high school, however, the situation is different. They typically spend less time on their studies than those who plan to attend college, in large part because most of them see very little connection between performance in high school and their future success in the labor market. Their teachers, of course, tell them that they are wrong, that they will be able to get a better job if they study hard. But when the students observe the success of prior graduates, they can see that it does not depend on how much they learned in high school. Statistical studies of the youth labor market confirm their skepticism about the economic benefits of studying hard:

- For high school students, high school grades and performance on academic achievement/aptitude tests have essentially no impact on labor market success. They have -
  --no effect on the chances of finding work when one is seeking it during high school, and
  --no effect on the wage rate of the jobs obtained while in high school.(Hotchkiss, Bishop and Gardner 1982)

- As one can see in table 2, for those who do not go to college full-time, high school grades and test scores had -
  --no effect on the wage rate of the jobs obtained immediately after high school in Kang and Bishop's (1984) analysis of High School and Beyond seniors and only a 1 to 4.7 percent increase in wages per standard deviation (SD) improvement in test scores and grade point average in Meyer's (1982) analysis of Class of 1972 data.
  --a moderate effect on wage rates and earnings after 4 or 5 years [Gardner (1982) found an effect of 4.8 percent per SD of achievement

Table 1

Effect of Academic Achievement
on the Wage Rates of High School Graduates

Study and Data Set	Date of Graduation	Age	Achievement Measures	Percent Change in Wage Rate Male	Female
Wage Rates					
Kang & Bishop (1985)	1980	19	Test-Math,Voc,Read	-1.9	-.5
High School & Beyond			GPA in Grade 12	.6	2.2
Gardner (1983)	1976-1982	19-24	AFQT	4.8	4.8
NLS Youth					
Daymont & Rumberger	1976-1979	19-21	GPA in Grade 9	.3	2.7
NLS Youth (1982)					
Meyer (1982)	1972	19	Class Rank Grade 12	0.0	2.5
(Weekly earnings)			Test Composite	1.2	2.2
Class of 1972					
Earnings					
Hause (1975)	1961	19	IQ,Test-Math	-3.7	--
Project Talent (white)		23	IQ,Test-Math	6.1	--

The table reports the percentage response of the wage rate or earnings to a one standard deviation improvement in a measure of academic achievement. For high school seniors a one standard deviation differential on an achievement test is about equal to 3.5 grade level equivalents or 110 points on the Verbal SAT. For GPA, one standard deviation is about .7 when C's = 2.0, B's = 3.0 and A's = 4.0.

and Meyer (1982) found an effect of 4.3 to 6.0 percent per SD of achievement],
--a small effect on employment and earnings immediately after high school.

- In almost all entry-level jobs, wage rates reflect the level of the job not the worker's productivity. Thus, the employer, not the worker, benefits from a worker's greater productivity. Cognitive abilities and productivity make promotion more likely, but it takes time for the imperfect sorting process to assign a particularly able worker a job that fully uses that greater ability -- and pays accordingly.

The long delay before labor market rewards are received is important because most teenagers are "now" oriented, so benefits promised for 10 years in the future may have little influence on their decisions.

1.2 The Benefits to Society of Academic Achievement

Although the economic benefits of higher achievement to the employee are quite modest and do not appear until long after graduation, the benefits to the employer (and therefore, to national production) are immediately apparent in higher productivity. Over the last 80 years, industrial psychologists have conducted hundreds of studies, involving many hundreds of thousands of workers, on the relationship between productivity in particular jobs and various predictors of that productivity. They have found that scores on tests measuring competence in reading, mathematics, science and problem solving are strongly related to productivity on the job[2](Ghiselli 1973).

Figure 1 compares the percentage effect of mathematical and verbal achievement (specifically a difference of three grade level equivalents in test scores or .7 GPA points (on a 4 point scale) on the productivity of a clerical worker, on wages of male clerical workers (from Taubman and Wales 1975), and on the wages of young women who have not gone to college (from Kang and Bishop 1984 and Meyer 1982). Productivity clearly increases much more than wage rates.[3,4] Apparently it is a youth's employer, not the youth, who benefits the most when a non-college-bound student works hard in school and improves his or her academic achievements. The youth is more likely to find a job, but not one with an appreciably higher wage. The next sub-section examines reasons for the discrepancy.

Impact of Academic Achievement

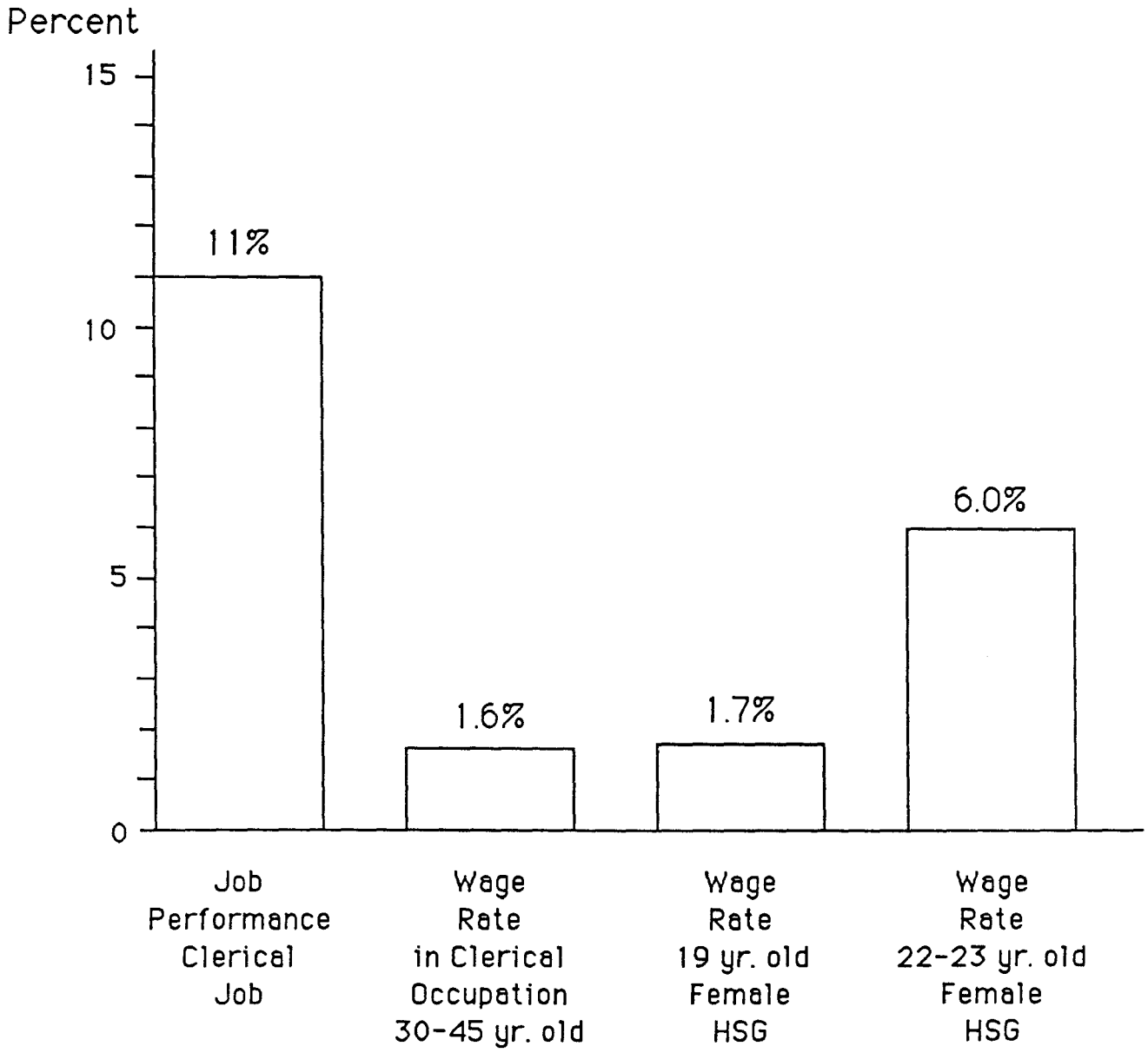

Figure 1

Reasons for the Discrepancy between Wage Rates and Productivity on the Job

Employers are presumably competing for better workers. Why doesn't this competition result in much higher wages for those who achieve more in high school or for those who do well on a general mental ability test? The cause appears to be the lack of objective information available to employers on applicant accomplishments, skills, and productivity.

Tests are available for measuring competency in reading, writing, mathematics, science and problem solving, but court decisions, e.g. Griggs vs. Duke Power Company (1971), and pressure from Equal Employment Opportunity Commissions resulted in a drastic reduction in their use after 1971. A 1987 survey of a stratified random sample of small and medium sized employers who were members of the National Federation of Independent Business found that aptitude test scores had been obtained in only 3.15 percent of the hiring decisions studied (Bishop and Griffin 1988).

Other potential sources of information on effort and achievement in high school are transcripts and referrals from teachers who know the applicant. Both these means are under-used. In the NFIB survey, transcripts had been obtained prior to the selection decision for only 13.7 percent of the hiring events in which someone with 12 or fewer years of schooling was hired. If a student or graduate has given written permission for a transcript to be sent to an employer, the Buckley amendment obligates the school to respond. Many high schools are not, however, responding to such requests. The experience of Nationwide Insurance, one of Columbus, Ohio's most respected employers, is probably representative of what happens in most communities. The company obtains permission to get high school records from all young people who interview for a job. It sent over 1,200 such signed requests to high schools in 1982 and received only 93 responses. Employers reported that colleges were much more responsive to transcript requests than high schools. High schools have apparently designed their systems for responding to requests for transcripts around the needs of college bound students not around the needs of the students who seek a job immediately after graduating.

There is an additional barrier to the use of high school transcripts in selecting new employees--when high schools do respond, it takes a great deal of time. For Nationwide Insurance the response almost invariably took

more than 2 weeks. Given this time lag, if employers required transcripts prior to making hiring selections, a job offer could not be made until a month or so after an application had been received. Most jobs are filled much more rapidly than that. The 1982 NCRVE employer survey of employers found that 83.5 percent of all jobs were filled in less than a month, and 65 percent were filled in less than 2 weeks.

The only information about school experiences requested by most employers is years of schooling, diplomas and certificates obtained, and area of specialization. Probably because of unreliable reporting and the threat of EEOC litigation, only 16 percent of the NFIB employers asked the applicants with 12 or fewer years of schooling to report their grade point average. Despite their limited use in selecting employees, employers apparently believe that grade point averages are good predictors of future productivity. A policy capturing experiment with a nationwide sample of 750 employers found that employer ratings of completed job applications were more affected by high school grade point average than any other single worker characteristic (Hollenbeck and Smith, 1984).

Hiring on the basis of recommendations by high school teachers is also uncommon. In the NFIB survey, when someone with 12 or fewer years of schooling was hired, the new hire had been referred or recommended by vocational teachers only 5.5 percent of the time and referred by someone else in the high school only 3.1 percent of the time.

Consequently, hiring selections and starting wage rates often do not reflect the competencies and abilities students have developed in school. Instead, hiring decisions are based on observable characteristics (such as years of schooling and field of study) that serve as signals for the competencies the employer cannot observe directly. As a result, the worker's starting wage primarily reflects the average productivity of all workers with the same set of educational credentials rather than that individual's productivity or academic achievement. A study of how individual wage rates varied with job performance found that when people hired for the same or very similar jobs are compared, workers who are 20 percent more productive than the average received wage offers that were only 1.6 percent higher than average (Bishop, 1987a). After a year at the firm, the more productive workers were more likely to be promoted, but the impact of reported productivity on a

worker's relative wage was still quite low. A 20 percent productivity differential generated a 4 percent wage differential at nonunion firms with about 20 employees and no wage differential at unionized establishments with more than 100 employees and at nonunion establishments with more than 400 employees.

Employers have a number of good reasons for not varying the wage rates of their employees in proportion to their perceived job performance. All feasible measures of individual productivity are unreliable and unstable. Workers are reluctant to accept jobs in which the judgement of one supervisor can result in a large wage decline in the second year on the job (Hashimoto and Yu 1980; Stiglitz 1974). Most productivity differentials are specific to the firm, and this reduces the risk that not paying a particularly productive worker a comparably higher salary will result in him going elsewhere (Bishop, 1987a), Pay that is highly contingent on performance can also weaken cooperation and generate incentives to sabotage others (Lazear 1986). Finally, in unionized settings, the union's opposition to merit pay will often be decisive.

This evidence implies that the social benefits of developing one's verbal, mathematical and scientific capabilities are considerably greater than the private rewards. Despite their higher productivity, young workers who have achieved in high school and who have done well on academic achievement tests do not receive higher wage rates immediately after high school. The student who works hard must wait many years to start really benefiting and even then the magnitude of the wage and earnings effect--a 1 to 2 percent increase in earnings per grade level equivalent on achievement tests--is considerably smaller than the actual change in productivity that results.

1.3 The Zero-Sum Nature of Academic Competition in High School

The second root cause of the lack of real motivation to learn is peer pressure against studying hard. Students report that "in most of the regular classes... If you raise your hand more than twice in a class, you are called a 'teachers pet.'" Its OK to be smart, you cannot help that. It is definitely not OK to study hard to get a good grade. This is illustrated by the following story related by one of my students:

> Erroneously I was lumped into the brains genus by others at school just because of the classes I was in. This really irked me; not only was I not an athlete but I was also thought of as one of those "brain geeks". Being a brain really did have a stigma attached to it. Sometimes during a free period I would sit and listen to all the brains talk about how much they hated school work and how they never studied and I had to bite my lip to keep from laughing out loud. I knew they were lying, and they knew they were lying too. I think that a lot of brains hung around together only because their fear of social isolation was greater than their petty rivalries. I think that my two friends who were brains liked me because I was almost on their level but I was not competitive (Tim 1986).

The primary reason for these rivalries and the peer pressure against studying is that the academic side of school forces students into a zero-sum competition with their close friends. Their achievement is not being measured against an absolute or an external standard. In contrast to scout merit badges where recognition is given for achieving a fixed standard of competence, the only measures of achievement that receive attention in school are measures of one's performance relative to one's close friends such as grades and rank in class. When students try hard and excel in school, they are making things worse for friends. When we set up a zero sum competition among close friends, we should not be surprised when they decide not to compete. All work groups have ways of sanctioning "rate busters." High school students call them "brain geeks", "grade grubbers" and "brown nosers".

Adolescents are not lazy. In their jobs after school and at football practice they work very hard. In these environments they are not competing against each other. They are working together as part of a team. Their individual efforts are visible to their peers and appreciated by them. On the sports field, there is no greater sin than giving up, even when the score is hopelessly one sided. In too many high schools, when it comes to academics, there is no greater sin than trying hard.

The second reason for peer norms against studying is that most students perceive the chance of receiving recognition for an academic achievement to be so slim they have given up trying. At most high school awards ceremonies the recognition and awards go to only a few--those at the very top of the class. By 9th grade most students are already so far behind the leaders, that they know they have no realistic chance of being perceived as academically successful. Their reaction is often to denigrate the students who take

learning seriously and to honor other forms of achievement--athletics, dating, holding your liquor and being "cool"--which offer them better chances of success.

The lack of external standards for judging academic achievement and the resulting zero sum nature of academic competition in the school also influences parents, the school board, and local school administrators. Parents can see that setting higher academic standards or hiring better teachers will not improve their child's grade point average or rank in class. The Scholastic Aptitude Test is intended to be curriculum free. Raising standards at the high school will have only minor effects on how my child does on the SAT, so why worry about standards. In any case, doing well on the SAT matters only for those who aspire to attend a college like Brown or Cornell. Most students are planning to attend a public college, many of which admit all high school graduates from the state with the requisite courses. Scholarships are awarded on the basis of financial need not academic merit.

The parents of children not planning to go to college have an even weaker incentive to demand high standards at the local high school. They believe that what counts in the labor market is getting the diploma not learning algebra. They can see that learning more will be of only modest benefit to their child's future, and that higher standards might put at risk what is really important--the diploma.

Only at higher levels of government such as the state or nation do the real costs of mediocre schools become apparent. The whole community loses because the work force is less efficient, and it becomes difficult to attract new industry. Competitiveness deteriorates and the nation's standard of living declines. This is precisely the reason why employers, governors and state legislatures have been the energizing force of school reform. State governments, however, are far removed from the classroom, and the instruments available to them for imposing reform are limited. If students, parents and school board officials perceive the rewards for learning to be minimal, state efforts to improve the quality of education will not succeed.

1.5 Incentives to Learn in Other Nations

The tendency to under-reward effort and learning in school appears to be a peculiarly American phenomenon. In Japan and many European countries,

the educational system administers achievement test batteries (eg. the 'O' Levels in the UK, the Baccalaureate in France) which are closely tied to the curriculum. Performance on these exams are the primary determinant of which university and which field of study a student is admitted to. The credentials which are awarded to secondary school completers signal not only that the individual has passed a particular set of exams but also the level of the pass. Top companies in Japan and Europe often hire lifetime employees directly out of secondary school, and performance on these exams, together with teacher recommendations and school grades, have a significant impact on who gets to work at the more prestigious firms (Leestma, et. al., 1987; Reubens 1969). Germany does not have common national or provincial exams so grades in school are a crucial determinant of which employer a German youth apprentices with and which university and specialty college bound students get to enter.

In Japan the best jobs are available only to those who are recommended by their high school. The most prestigious firms have long term arrangements with particular high schools to which they delegate the responsibility of selecting the new hire(s) for the firm. It is understood by everyone that when more than one student is interested in a particular job, the student with the highest grades and best exam results is to be referred. The number of graduates that a high school is able to place in this way depends on its reputation and the company's past experience with graduates from the school. Schools with poorly prepared students find it difficult to place them in good jobs. A school which does not live up to this implicit understanding loses the opportunity to make referrals in the future. The following incident demonstrates what happens when meritocratic principles are set aside by the school.

> A couple of years ago, after the school decided to recommend a student for a job, another student told us that he wished to apply for the same firm, and he (and his parents) said he had strong personal connections with an executive in the firm. Although we were not comfortable about doing this, we allowed the second student to apply (and we) withdrew the other (better qualified) student. Later, the firm complained that the student lacked the requisite ability, and they have stopped offering a job to us since then. We visited and explained what happened, but, after all, we lost the relation with the firm. (Furikawa 1986, article written by a teacher in charge of job placement in a high school; quoted in Rosembaum/Kariya, 1987, page 10).

Japanese parents know that their son or daughter's future economic and social rank in society critically depends on which high school is attended and on how much is learned in school. Entry into the better high schools depends primarily on the child's performance in junior high school, not on where the parents can afford to live as in the US. Since the reputation of the high school is so important, the competitive pressure reaches down into junior high school. Forty-five percent of junior high school students attend Juku, private schools which provide tutoring appearing on the exam that determines which high school one is admitted to. Due to the importance of the national exams in the allocation of students to high school, colleges and jobs, learning achievement tends to be measured relative to everyone else in the state or nation and not just relative to one's classmates in the school. These are the reasons why Japanese parents demand so much of their children and of their schools. This is why Japanese 5th graders spend 32.6 hours a week involved in academic activities while American youngsters devote only 19.6 hours to their studies (Stevenson, Lee and Stigler 1986).

Japanese adolescents work extremely hard in high school, but once they have entered college, they stop working. For most students, a country club atmosphere prevails. The reason for the change in behavior is that employers apparently care only about which university the youth attends, not about the individual's academic achievement at the university. Studying very hard is not a national character trait, it is a response to the way Japanese society rewards academic achievement.

American students, in contrast, take it easy in high school but generally work quite hard in college. This change is in large part caused by the fact that when higher level jobs requiring a bachelors or associates degree are being filled, employers pay much more attention to grades and teacher recommendations than when they hire high school graduates. The NFIB survey found that when college graduates were hired, 26 percent of the employers had reviewed the college transcript before making the selection, 7.8 percent had obtained a recommendation from a major professor and 6.3 percent had obtained a recommendation from a professor outside of the graduates major or from the colleges's placement office.

If learning were defined by an absolute standard and not by one's ranking in the school, and the rewards for learning were as attractive as they are

in Japan, everyone--students, teachers, parents and school boards--would behave very differently. Parents would demand that their school be the best and would be willing to tax themselves heavily to achieve that result. The status and salary of secondary school teachers would rise, the requirements for entry into the profession would increase, and standards of teacher performance would improve. If parents were not satisfied with their child's academic progress, they would send him or her to a tutor or an after school just as Japanese parents do. Adolescents would no longer be such reluctant learners.

II. HOW TO IMPROVE THE QUALITY OF EDUCATION

The rapid gains in academic achievement overseas and declining achievement here spell trouble for the American economy (Koretz 1987; Bishop 1987b). The problem is so serious and so longstanding that nothing short of radical reform will help. Most of the reforms now underway are desirable, but by themselves they are insufficient.

Proposed reforms of secondary education include stricter graduation requirements, more homework, increases in the amount and difficulty of course material, greater emphasis on the basics (English, math, science, social science, computer science), and improvements in the quality of teaching through higher salaries, career ladders, and competency tests for teachers. Although important, these reforms are limited in that they emphasize changes in the content and quality of what is offered by the school and require the student to work harder. They have given insufficient attention to how to motivate students to work harder. Learning is not a passive act; it requires the time and active involvement of the learner. In a classroom with 1 teacher and 18 students, there are 18 learning hours spent to every 1 hour of teaching time. Student time is, therefore, very important, and how intensely that time is used affects learning significantly. Clearly, then, attention needs to be given to how much time and energy students devote to learning.

The key to motivation is recognizing and rewarding learning. Individual learning goals should be established which stretch the student to the maximum extent possible. Achievement of these goals would be assessed by the school and recognized at an awards ceremony. The student would receive a competency profile describing these achievements that would aid in securing employment. If employers know who has learned what, they will provide the rewards.

The second way schools can generate stronger incentives for learning is to restructure school wide and classroom recognition of student achievement so that everyone has a chance to be recognized for their contribution: greater effort by everybody makes everybody better off, and there are significant rewards for learning and real consequences for failing to learn. As Theodore Sizer has advocated, "The better the performance, the greater [should be] the latitude given the student."(Sizer p. 67) Bloom's theory of mastery learning says that there are no differences in what people can learn, only differences in the rate at which people learn. Given enough time, almost everyone can achieve mastery. Students who fail to learn on the first try should commit extra time to the learning task. Extra classes could be scheduled after school and during the summer. Learning would be defined as gains in competence and gains in knowledge, not as an absolute standard of performance. The gifted and the handicapped would be stretched as would everyone else. The reward for effort and for learning would be free time. Schools would be open all day and all year. Enrichment programs designed to attract all students would be offered during the additional time. Everyone would be encouraged to participate but only the unsuccessful learners would be obligated to participate.

Some might respond to these proposals by stating a preference for intrinsic over extrinsic motivation of learning. This, however, is a false dichotomy. Nowhere else in our society do we expect people to devote thousands of hours to a difficult task while receiving only intrinsic rewards. Public recognition of achievement and the symbolic and material rewards received by achievers are important generators of intrinsic motivation. They are, in fact, one of the central ways a culture symbolically transmits and promotes its values.

It goes without saying that these reforms involve a radical restructuring of our schools. No fault adolescence and the zero sum nature of academic competition would pass from the scene. The incentives faced by everyone in the system would change and this would probably lead to a major increase in public investment in education. The proposed reforms are not simple to implement and they need not be implemented all at once. The discussion of the recommendations that follows is organized into six sections:

2.1 Improving Measures of Academic Achievement.

2.2 Getting the Peer Group to Encourage Learning.

2.3 Creating New Learning Opportunities in School.

2.4 Generating Additional Recognition and Reward for Learning.

2.5 Helping Students Obtain Good Jobs

2.1 Improving Measures of Academic Achievement

Certifying Competencies

Schools should provide graduates with certificates or diplomas that certify the students' knowledge and competencies, not just their attendance. Competency should be defined by an absolute standard in the way Scout merit badges are. Minimum competency tests for receiving a high school diploma are an example of an externally imposed standard of achievement. They are a step in the right direction especially when they are taken early in high school and remedial classes are offered after school and during the summer for those who fail on the first try. However, some students arrive in high school so far behind, and the consequences of not getting a diploma are so severe, we have not been willing to set the minimum competency standard very high. As a result, minimum competency tests have only modest incentive effects for the great majority of the students.

Competency Profiles

Another way to motivate students is to give them feedback on their accomplishments through the mechanism of a criterion referenced competency profile. Competency profiles are a check list of competencies needed in a specific occupation which the student either has or can develop through study and practice (see exhibit 1). The ratings of competence that appear on a competency profile are relative to an absolute standard, not relative to their classmates. By evaluating students against an absolute standard, the competency profile avoids a negative feedback of one student's effort into another student's grade. It encourages students to share their knowledge and to teach each other.

EXHIBIT 1

Area Vocational Center
Ithaca, New York 14850
(607) 257-1551

EMPLOYABILITY PROFILE

NAME _____ COMPONENT SCHOOL _____

COURSE AUTO MECHANICS II DATE _____

1. ABOVE ENTRY LEVEL 2. ENTRY LEVEL 3. NEEDS IMPROVEMENT 4. UNACCEPTABLE

SAFETY

_____ Operate fire extinguisher
_____ Operate shop equipment safely including floor jacks, safety jacks, grinder, oxy-acetylene torch and hoists
_____ Clean shop and keep house properly

GENERAL SKILLS

_____ Locate and interpret technical data
_____ Demonstrate written communication skills
_____ Demonstrate verbal communication skills
_____ Performs required shop maintenance
_____ Demonstrate shop safety and practices

BRAKES

_____ Adjust brakes
_____ Install brakes, both drum and disc
_____ Overhaul wheel cylinders, drum type and disc
_____ Bleed system, pressure bleeder and using foot brake
_____ Adjust emergency brake
_____ Install emergency brake
_____ Install, clean and repack front wheel bearings, install seals and adjust
_____ Troubleshoot brakes
_____ Troubleshoot problems

AMMCO BRAKE LATHE

_____ Observe safety rules
_____ Set up and turn drums
_____ Set up and turn rotors
_____ Measures drums and rotors

STEERING & SUSPENSION SYSTEMS

_____ Inspect front end parts
_____ Replace front end parts
_____ Replace rear suspension parts
_____ Repack front wheel bearings & install grease seals
_____ Adjust front wheel bearings

FRONT END ALIGNMENT

_____ Interpret whell alignment and geometry
_____ Locate and interpret wheel alignment specifications
_____ Set up and operate alignment equipment

Adjust caster, camber on:

_____ Eccentric type front end
_____ Shim type front end
_____ Moveable "A" frame type front end
_____ Rear wheels
_____ Adjust toe in, toe out

OXY-ACETYLENE TORCH

_____ Observe safety standards and use proper attire
_____ Adjust regulators for proper flame for heating & welding
_____ Be able to cut, braze and weld

NEW YORK STATE INSPECTION

_____ Make out inspection records
_____ Follow inspection procedures
_____ Interpret rules and regulations
_____ Test P.C.V. System
_____ Check out emissions with analyzer

AUTO AIR CONDITIONING

_____ Understands theory of operation
_____ Understands system operation
_____ Understands system controls and automatic systems
_____ Partial recharging
_____ Servicing of system
_____ Diagnosis of system

COMPUTERIZED CONTROLS

_____ System check of computer command
_____ System check of Ford ECC IV

IGNITION SYSTEM & TUNE-UP

_____ Explain and identify breaker point ignition system
_____ Operate timing light and set timing – check advance
_____ System check of Chrysler Electronic Ignition System (EIS)
_____ System check of Chrysler hall effect Electronic Ignition
_____ System check of AMC Breakerless Inductive Discharge Ignition System (BID)
_____ System check of 6.M C-3
_____ System check of Ford Dura Spark and EEC System
_____ Remove and replace rotor, distributor cap, rotor, and secondary harness
_____ Understand electronic ignition service, testing & replacement of components
_____ Remove and install spark plugs using proper torque specfications

SET UP, CALIBRATE, OPERATE 1215 ENGINE ANALYZER

_____ Recognize and interpret secondary wave form patterns
_____ Recognize and interpret vacuum gauge readings
_____ Recognize and interpret tachometer readings
_____ Operate advance unit timing light
_____ Interpret dwell readings
_____ Test coil output

CLEANING, WASHING & WAXING

_____ Wash car, car windows, use chamois, clean interior of car (ash tray, door jams, etc.)
_____ Know how to wax a car by hand
_____ Used car reconditioning

VOLT AMP TESTER

_____ Set up VAT 40
_____ Perform battery load test
_____ Perform charge system test
_____ Perform starter load test

OTHER

_____ Makes flat rate estimates
_____ Serves as shop foreman
_____ Organizes parts cabinets and supplies

TIRES

_____ Mount & Dismount
_____ Balance - Sun Computer
_____ Balance - Bubble
_____ Repair Tires
_____ Rotate Tires

Comments: _____

_____

_____

WHITE COPY-STUDENT SERVICES

Instructor _____

A second advantage of the competency profile approach to evaluation is that students can see their progress as new skills are learned and checked off. The skills not yet checked off are the learning goals for the future. Seeing such a check list get filled up is inherently reinforcing.

With a competency profile system, goals can be tailored to the student's interests and capabilities, and progress toward these goals can be monitored and rewarded. Students who have difficulty in their required academic subjects could nevertheless take pride in the developing occupational competence now recognized just as prominently as course grades in academic subjects. Upon graduation, the competency profile would be encased in plastic and given to the student to serve as a credential certifying occupational competencies.

Instituting Statewide Examinations

States should adopt statewide tests of competency and knowledge that are specific to the curriculum being taught, such as New York State's Regents Examinations. If a state does not have such exams, a school district (or the members of each department of a school) could establish its own exams. Such examinations would offer several benefits.

- Better inform students and parents about how well the student is doing and, thus, help parents work with teachers to improve their children's performance.
- Make the relationship between teachers and students more cooperative, with the teacher and students working jointly to prepare the students for the exam.
- Strengthen student incentives to learn because they would now be able to signal to their parents and employers their competence in specific curriculum areas.
- Create a database that school boards and parents could use to evaluate the quality of education being provided by their local school.
- Enable employers to use scores on these examinations to help improve their selection of new employees. If the uncertainties involved in hiring are reduced, expanding employment will become more profitable, total employment will increase, and recent high school graduates will be better able to compete with more experienced workers.

Reform the SAT and ACT Tests

While national tests are necessary, the Scholastic Aptitude Test (SAT) is not the kind of test that is helpful. The SAT suffers from two very serious limitations: the limited range of the achievements that are evaluated and its multiple choice format. The test was designed to be curriculum free. To the extent that it evaluates the students' understanding of material taught in schools, the material it covers is vocabulary and elementary and junior high mathematics. Most subjects studied in high school--science, history, civics, technology, computers, trigonometry and statistics--are completely absent from the test. As a result, it fails to generate incentives to take the more demanding courses or to study hard. The multiple choice format is also a severe limitation. National and provincial exams in Europe are predominantly essay examinations. The absence of essays on the SAT and ACT tests contribute to the poor writing skills of American students. The test advertises itself as an ability test but is in fact an achievement test measuring a very limited range of achievements (Bishop 1988).

Christopher Jencks and James Crouse (1982) have made many of the same criticisms of the SAT and have recommended that it evaluate a much broader range of achievements. I support their position. A portion of the test should involve writing an essay. Knowledge and understanding of literature, history, technology and science, and higher order thinking skills should all be assessed.

Colleges should require that students take at least two subject specific exams. The advanced placement exams are examples of the kind of exams we need. These exams should not be limited to the multiple choice format. Foreign language exams, for example, should test conversational skills as well as reading and writing. Students taking science courses should be expected to conduct experiments and demonstrate the use of lab equipment.

Promote the Development of New Assessment Mechanisms

Linking assessment to the curriculum requires a greater diversity of assessment mechanisms. States should not be prevented from having their own unique curriculum simply because the available examinations and assessment tools are so limited. However, the need for multiple versions and for fairness to minorities make test development very expensive. The federal government should underwrite state consortia and other organizations that seek to develop

alternatives to currently available tests and assessment mechanisms. Priority needs to go to developing methods of assessing higher order thinking skills and competencies that cannot be evaluated using a multiple choice format.

While testing organizations would publish and oversee grading of the exams, the subjects covered by the exam and the skills tested would be selected by a committee of teachers and specialists in the field. Examples of groups that might sponsor and direct test development are the National Council of Teachers of Mathematics, associations of private colleges, state boards of education, and textbook publishers. There should be a conscious effort to maximize philosophical and educational diversity in the selection of consortia for funding. The push for better measures of student learning should not be limited to the academic arena. A similar effort should be made in the vocational area.

2.2 Getting the Peer Group to Encourage Learning

Cooperative Learning

One effective way of inducing peers to value learning and support effort in school is to reward the group for the individual learning of its members. This is the approach taken in cooperative learning. Students are grouped into evenly matched teams of 4 or 5 members that are heterogeneous in ability. After the teacher presents new material, the team works together on work sheets to prepare each other for periodic quizzes. The team's score is an average of the scores of team members, and high team scores are recognized in a class newsletter or through group certificates of achievement.[5]

Slavin has recently reviewed 27 field experiments that compared cooperative learning strategies combining group study and group reward for individual learning with the standard individual-reward-for-individual-learning system (Slavin 1985).[6] In 24 of these studies, cooperative learning had a statistically significant positive effect on learning. Where effect sizes were available, they were approximately 30 percent of a standard deviation on the post test.

A number of studies have been conducted in which the various components of the cooperative learning model described previously have been tested on their own or in 2 x 2 factorial experimental designs. The four studies that examined the effects of group study without group rewards for individual

learning found that such a strategy had no positive effects. Group study methods that offered group rewards based on the quality of a group product were also not found to increase learning. This approach appears to fail because the group gets just one student to do the work for everyone else. These results suggest that the two key ingredients for successful cooperative learning are as follows:

- A cooperative incentive structure--awards based on group performance--seems to be essential for students working in groups to learn better.

- A system of individual accountability in which everyone's maximum effort must be essential to the group's success and the effort and performance of each group member must be clearly visible to his or her group mates.

These results provide important evidence of the importance of peer norms. What seems to happen in cooperative learning is that the team develops an identity of its own, and group norms arise that are different from the norms that hold sway in the student's other classes. The group's identity arises from the extensive personal interaction among group members in the context of working toward a shared goal. Since the group is small and the interaction intense, the effort and success of each team member is known to other teammates. Such knowledge allows the group to reward each team member for his or her contribution to the team goal, and this is what seems to happen.

2.3 Creating New Opportunities for Learning in School

Turn Schools into All Day Learning Centers

Schools should remain open after the end of the regular school day. A full range of remedial and enrichment programs and extra curricular activities and interscholastic sports should be offered. The library should remain open during this period, and the auditorium could be used for showing educational films and video tapes. Extra help would be available for students having difficulty with the core curriculum. Volunteers to provide tutoring and to offer special interest courses could be recruited from the community. Employers and unions could be approached about sending a member of their staff to supervise an extra curricular activity or provide tutoring. Private teachers of music, art and other subjects could also use school facilities during these hours. The benefit of this reform is that (1) the regular school day would be freed up for more intensive study of the core curriculum, (2)

slower students would be given the extra instruction they need, and (3) the phenomenon of the latch key child would be significantly reduced or eliminated.

Keep the Schools Open During the Summer

Longitudinal studies of learning have found that the pace of learning slows considerably during the summer and that disadvantaged students especially lose ground during the summer months (Heyns 1987). Figure 2 and 3 which are taken from Hemenway et al (1978, Figure 1.1 and 1.2, pp. 29-30) graphically demonstrates how small declines during the summer months of the students in the bottom quartile of the class can cumulate into large gaps in achievement by the end of sixth grade. Experimental evaluations of STEP, a program for disadvantaged youth that combines a part time summer job with about 90 hours of remediation, has found that adding the remediation to the summer job results in gains in academic achievement of .5 grade level equivalents (Corporation for Public Private Ventures 1988). It would appear that summer programs targeted on educationally and economically disadvantaged children are likely to have high payoffs.

A variety of remedial, enrichment and special interest short courses should be offered during the summer. While many of the teachers would be regular school staff, an education degree and state certification would not be required. Local businesses and unions should be encouraged to offer their employees as teachers. Private teachers of music, art, athletics and academic subjects could also offer their own courses at the school. Where appropriate, academic credit would be given for the summer school courses. The school district would provide transportation.[7]

2.4 Generating Additional Recognition and Rewards for Learning

A Massive Dose of Mastery Learning

Students who are not learning at the desired rate should be expected to commit additional time to the task after school and during the summer. At the beginning of the school year school personnel would meet with the student and his or her parents to set goals. Students who are not performing at grade level in core subjects and who do not make normal progress during the school year should be kept after school for tutoring and remedial instruction and required to attend summer school. Assessments of progress

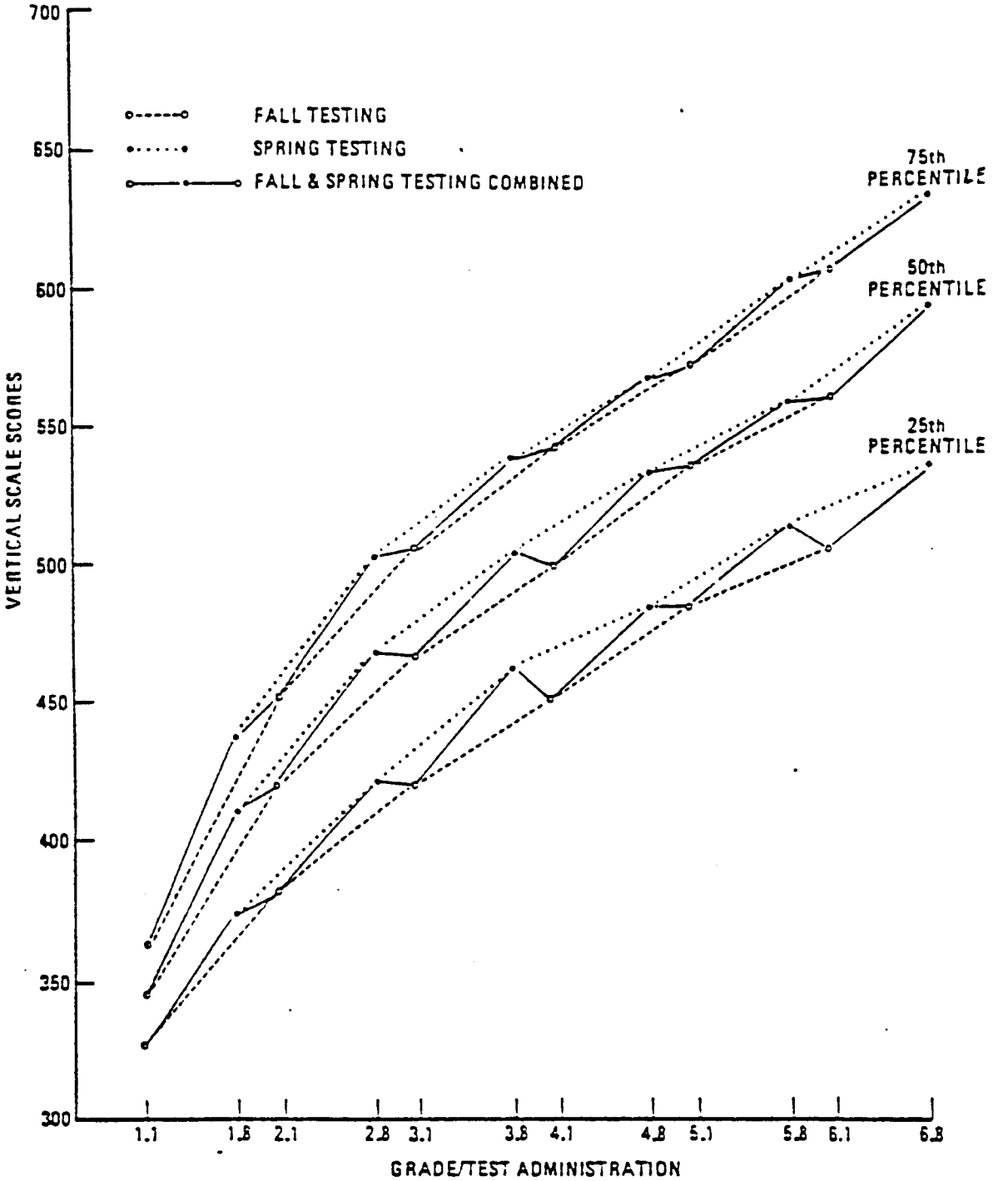

Figure 2. Vertical Scale Scores as a Function of Grade Level by Quartiles for the Debiased CTBS Reading Test

Note: The spring-to-fall differences are always associated with cross-sectional changes in samples and are frequently also associated with differences in test levels. Negative 'growth', when it occurs, may be attributed to sample differences and test-level differences. When raw scores are compared for the same test levels, the differences are either positive or small when negative. Therefore, the zig-zag nature of the curves above should not be carelessly attributed to 'summer drop-off'.

Source: Hemenway et al. (1978), Figure 1-1, p. 29.

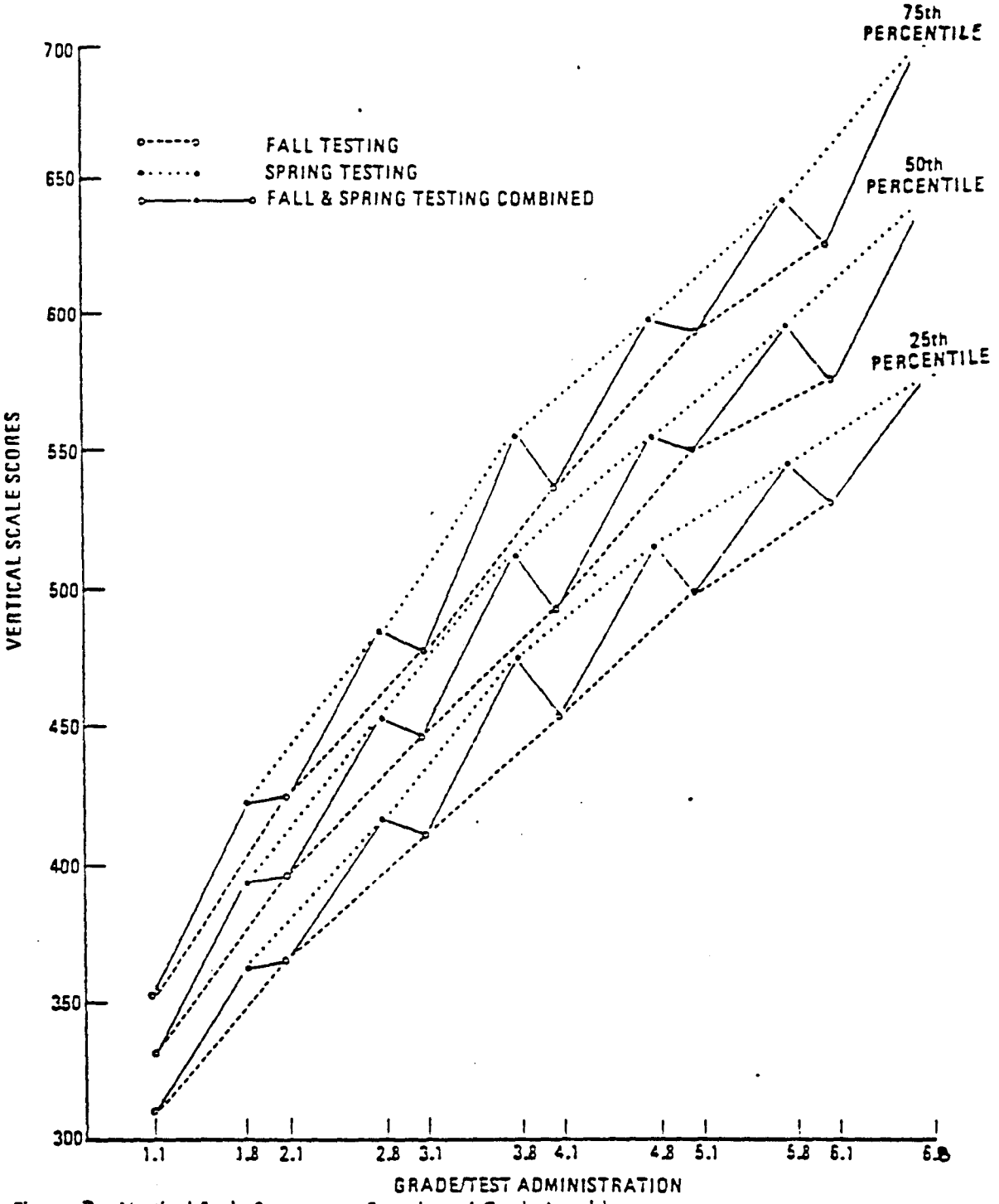

Figure 3.. Vertical Scale Scores as a Function of Grade Level by Quartiles for the Debiased CTBS Math Test

Note: The spring-to-fall differences are always associated with cross-sectional changes in samples and frequently also associated with differences in test levels. Negative 'growth', when it occurs, may be attributed to sample differences and test-level differences. When raw scores are compared for the same test levels, the differences are either positive or small when negative. Therefore, the zig-zag nature of the curves above should not be carelessly attributed to 'summer drop-off'.

Source: Hemenway et al. (1978), Figure 1-2, p. 30.

should be made at appropriate points during the school year to inform students of their progress and to enable those who are participating in remedial programs after school to demonstrate they are now progressing satisfactorily.[8] Course grades and teacher evaluations would be a central part of the assessment process, but there should be an external yardstick as well. The external yardstick might be a competency check list, a mastery test keyed to the textbook, or an exam specified by the state, the school or collectively by the teachers in the that grade level or department. The assessment tools would be established at the beginning of the school year. The reason for the external yardstick is that it helps insure that students perceive the standard to be absolute rather than relative to others in the class, and it helps create a communality of interest between teacher and student. Teachers need to be perceived as helping the student achieve the student's goals not as judges meting out punishment. Final decisions regarding who would be required to attend summer school could be made by committees of teachers possibly with some administrative representation. Since students will want to avoid being required to get remedial instruction after school and during the summer, this will be a powerful incentive for them to devote themselves to their studies.

Honoring Academic Achievement

Schools should strengthen their awards and honors system for academic and nonacademic accomplishments. The medals, trophies, and school letters awarded in interscholastic athletics are a powerful motivator of achievement on the playing field. Academic pursuits need a similar system of reinforcement. Public school systems in Tulsa and a number of other cities have started awarding school letters for academic achievements. Awards and honors systems should be designed so that almost every student can receive at least one award or honor before graduation if he or she makes the effort. Outstanding academic performance (e.g., high grades or high test scores) would not have to be the only way of defining excellence. Awards could be given for significant improvements in academic performance since the previous year or since the beginning of the school year, for public service in or out of school, for leadership and participation in extracurricular activities, for participation in student government, for perfect attendance records, and for

student of the week (criteria would vary weekly). The standard for making an award should be criterion referenced: if greater numbers achieve the standard of excellence, more awards should be given.

A prominent place in the school should be reserved for bulletin boards where pictures of the most recent winners and reasons for their receiving recognition could be posted. Another form of recognition could be displays of student work: art, science, social studies, vocational education projects, and so forth. Periodically, the parents of the most recent award winners and sponsoring teachers should be invited to an evening assembly at which time the principal would award the students the certificate or plaque recognizing their accomplishments. While the primary purpose of this system would be to improve the school's educational climate, a secondary effect would be the creation of a tool to help the student obtain a good job. The potential of these awards as an aid to improving employability should be made clear to students and parents.

Allow Employers to Use Scores on Achievement Tests in Selecting New Hires

There is now a great deal of evidence that scores on tests like the SAT and the ACT are excellent predictors of job performance in a great variety of jobs and do not discriminate against minorities or women (Schmidt and Hunter and Northrop 1984, Hunter and Hunter 1984). Despite this, EEOC regulations and case law have in the past required that a very expensive validation study be conducted before a firm can use any test to help select employees. The result was to greatly diminish the use of tests for employee selection and to substantially reduce the rewards for learning. There is a strong public interest in strengthening the incentives to learn so government regulations should certainly not be a barrier to the use of tests and should encourage the use of broad spectrum achievement tests rather than "aptitude" tests. One approach would be to eliminate all government regulations in this area. An alternative would be to give broad spectrum achievement tests blanket clearance for broad categories of jobs and allow the use of tests measuring other types of aptitudes on a case by case basis.

2.5 Helping Students Obtain Good Jobs

Schools can help their graduates avoid unemployment and get better jobs by improving the quality and facilitating the flow of employment-related

information to students and their potential employers. Improving the information available to all parties in the job search/hiring system will have the following consequences:

- A greater share of school leavers will find employment.
- The jobs they obtain will pay better and offer more training and job security.
- The better jobs will be distributed more in accordance with the objective merit of the candidate.
- Students will commit a greater amount of time and effort to their studies as they perceive the greater payoffs for doing so.

Policies whose primary objective is to ease the school-to-work transition or to facilitate information flows can also motivate students to apply themselves to their studies. Many students who would otherwise not be motivated to study, for example, can be motivated to apply themselves if they are shown the connection between today's schoolwork and tomorrow's jobs. Policies that facilitate information flow make the connection between effort in school and later labor market success more visible. Such policies include the following.

Offering Courses in Job Search Skills

Schools have an important role to play in preparing youth to navigate in the labor market. Career guidance and career counseling have been viewed as important school functions for many decades. Realizing that a career choice cannot be implemented unless a job can be obtained in the chosen field, many schools are teaching youths how to search for work (Wegmann 1979). They need to get practice in writing a resume, in interviewing and in employing the more effective informal modes of job search.

Acting as a Source of Informal Contacts

School personnel can be a reference and a source of job contacts for their students. Some students may feel that they do not have and cannot develop good employment contacts. School personnel can help out by building and maintaining trusting relationships with local employers and then helping to match employer and student needs. Students from disadvantaged backgrounds have special need for this kind of help, because their relatives and neighbors typically lack the work world contacts of middle-class families.

Many schools provide job placement and referral services for their students and graduates. Three and a half million people found their current job through a referral by their school or a teacher (Rosenfeld 1975). This function of schools is a lot more important than is generally thought.

Whenever possible, there should be a one-on-one relationship between a specific teacher or administrator and an employer. A study by McKinney et al. (1982) found that when schools formalize this relationship by creating a placement office, the number of jobs found for students tends to decrease. The best example of an informal contact system is the one that exists for many vocational students. Vocational teachers often know local employers in related fields; they also know their students well enough to recommend them. This kind of informal system could be extended to include all students not planning to attend college.

Guiding students in assessing jobs and employers.

Students need help in assessing jobs, and schools can provide them with the information necessary to make these assessments. Career guidance tends to focus on the individual's choice of occupation. Attention also needs to be given to selecting an employer and matching employer/employee needs. Young people who find good, high-wage jobs with promotion opportunities will end up changing jobs less often. Students need to learn how to assess such dimensions of a firm as training opportunities, promotion opportunities, job security provisions, maternity leave rules, vacation policies, policies regarding tardiness, friendliness of co-workers, effectiveness of supervision, medical insurance, educational leave, and tuition reimbursement.

Inviting Employers Into the School

Another way schools can help students develop informal contacts is to invite employers into the school. A retired employer, for example, can make an excellent volunteer advisor. This individual can come to the school and get to know a group of students. Students benefit from hearing firsthand stories about the business world and hearing what employers expect from employees. Students would also benefit by knowing someone in the field--by having a contact. The retired employer can help students by referring them to other employers.

Releasing Student Records

The school can help students provide employers with information by developing an equitable and efficient policy for releasing student records. While developing this policy, school officials should keep in mind the dual goals of protecting the student's right to privacy and trying to help the student find a good, suitable job. The student and his or her parents should receive certified copies of the transcript and other records that might be released.

Schools can develop a form that would explain to parents and students their rights, as well as the pros and cons of disclosing information. The Buckley Amendment requires that the form specify the purpose of disclosure, which records are to be released, and who is to receive the records. The law allows the student to specify a "class of parties." The class specified could be "all potential employers contacted by the student," which would cut down on the paper work needed. Once the student has filed a request, the school is required by law to comply. Schools can best serve students by handling all inquiries expeditiously and without charge.

Developing a Job Search Portfolio

Schools should consider providing students with a job search portfolio or competency profile that records all their accomplishments in one place. Students attempting to market themselves to employers will have greater success if all their school achievements are summarized in one compact, standardized document. Compactness and standardization make it easier for employers to use information in their hiring decisions and this facilitates information flow.

The coverage and format of the document are probably best worked out cooperatively by a committee that includes school administrators, employers, and other interested parties. Developing and using such a document might be a part of a campaign to enlist commitments from major local employers to hire the school's graduates. Developing the information system cooperatively is a good way to ensure that the finished form will be beneficial to schools, employers, and students.

Students have many talents and skills that can be highlighted in such a document. The job search portfolio should emphasize accomplishments and

performance indicators that are most useful in identifying a good match between a job and a youth. Students and parents should receive copies of it, and students should be encouraged to bring copies with them when they apply for jobs. Employers should be encouraged to ask to see the portfolio and keep a copy when a job application is filed.

Summary

Students leaving school today to look for jobs face serious problems. When an employer is considering a group of applicants, a recent school leaver is at a disadvantage. The employer generally knows little about new entrants to the labor market and will probably pass over them in favor of more experienced candidates. To get a good job, the young person must be noticed; he or she must stand out in a crowd of applicants. Schools can help students overcome such problems by taking these steps:

- Help students acquire the skills in math, science and language arts which are necessary to be a productive worker in the information age.
  - --Motivate students by honoring academic achievement just as systematically as athletic achievement is honored.
  - --Induce the peer group to value learning by instituting cooperative learning
  - --Keep the school open during the late afternoon and the summer and require students who are not at grade level to devote extra time to learning.
  - --Award certificates and diplomas that recognize competencies achieved rather than just time served.
  - --Establish a competency profile system which recognizes achievement defined on an absolute scale not relative to classmates.
  - --Adopt state wide achievement tests which measure competency in writing and higher order thinking skills.

- Teach students to make themselves worth marketing and then to market themselves.
  - --Teach students how to search for a job most effectively.
  - --Teach students to evaluate employers and job offers.

- Help employers get information about students.
  - --Improve communication with employers to maximize performance rewards.
  - --Teach students the value of giving employers information.
  - --Develop in cooperation with local employers a job search portfolio/ transcript that reports student accomplishments in a standardized format, and encouraging students to use it when seeking a job
  - --Make it as easy as possible for employers to get student transcripts and restructure them so that they are more informative.
  - --Encourage school personnel to refer students to employers.
  - --Develop long-term relationships between school staff and local employers who hire their school's graduates.

Employers can help by taking the following steps:

- Ask school personnel to recommend graduating students for jobs at their firms.
- Give greater emphasis to school grades and performance on achievement tests (such as the New York State Regents Exams) when making hiring selections, and publicize this emphasis to the community.
- Work cooperatively with schools to ensure that transcripts are sent rapidly when student permission has been obtained and to establish a more complete standardized reporting framework like a job search portfolio.
- Volunteer to speak in schools about the competencies required for getting a job and for being successful at work.
- Volunteer to become a mentor for small groups of students.

Footnotes

1. For example, numerous studies show that lower tuition at public institutions and more financial aid raise the probability of high school graduates going to college, and that this effect is larger for young people from low-income families (see Jackson and Weathersby 1975 for a review of this literature). College enrollments and student choice of an undergraduate major or a postgraduate program respond to the income advantage and the perceived availability of jobs in the field (Freeman 1971, 1976a, 1976b; Bishop 1977). Labor market conditions also affect dropping out of high school (Bowen and Finegan 1969; Lerman 1972; Gustman and Steinmeier 1981). The minimum wage (Ehrenberg and Marcus 1982) and the quality of the schooling offered (Gustman and Pidot 1973) have also been shown to affect drop out rates.

2. These tests measure the competencies that are the prime objectives of schooling. School attendance has been shown to improve performance on these tests (Lorge, 1945). Between World War I and World War II, the average IQ test scores of literate white army draftees increased by 11 points.

3. An increase of 110 SAT is chosen because it represents one standard deviation increase. Since SAT tests are scaled to have a standard deviation of 110, simultaneous one standard deviation improvements on both verbal and math tests would be like raising both verbal and math SAT scores from 400 to 510. If one begins at the 50th percentile of a normally distributed population, a one standard deviation improvement in performance raises one to the 84th percentile. For 12th graders such an improvement is approximately equal to 3 grade equivalents. By reporting the percentage changes in labor market outcomes that result from a one standard deviation change in GPA or performance on a test, we make the results of studies done on very different cohorts of workers comparable over time and understandable to the layman.

4. Studies that measure output for different workers in the same job at the same firm, using physical output as a criterion, have found that the standard deviation of output varies with job complexity and averages about .164 in routine clerical jobs and .278 in clerical jobs with decision making responsibilities(Hunter, Schmidt and Judiesch 1988). Since there are fixed costs to employing an individual (facilities, equipment, light, heat and overhead functions such as hiring and payrolling), the coefficient of variation of marginal products of individuals will be considerably greater (Klein, Spady, and Weiss 1983). On the assumption that the coefficient of variation of marginal productivity for clerical jobs is 30 percent[1.5*(.33*.278+.67*.164)], a .5 validity for general mental ability implies that an academic achievement differential between two individuals of one standard deviation (in a distribution of high school graduates) is associated with a productivity differential in the job of about 11 percent (.5*.74*30%). The ratio of the high school graduate test score standard deviation to the population standard deviation is assumed to be .74.

5. In many cooperative learning systems, the individual's contribution to the team score is a gain in score relative to an individualized learning expectation.

6. The review was limited to studies in which treatments lasted at least 2 weeks in a regular school setting. The experimental and control groups were exposed to the same curriculum, and students were not allowed to help each other on final tests.

7. To facilitate scheduling and to maximize time on task, courses would run for an entire half day or all day. During the lunch break the buses could transport half day students to and from the school. Students would not have to give up their whole summer, for the short courses would be organized in 3 or 4 week units.

8. The exams would cover the material covered during the year. Ideally an individual achievement standard would be assigned to each student at the beginning of the year. This way students with major deficiencies in their background would not be facing an impossible goal. One way this could be done would be to require summer school only for those who simultaneously fall below some absolute standard and who fail to make at least a one year gain in terms of grade level equivalents from June to June.

Bibliography

Bishop, John. "Employment Testing and Incentives to Learn." Center for Advanced Human Resource Studies, Working Paper #88-12, July, 1988.

Bishop, John. "The Effect of Public Policies on the Demand for Higher Education." Journal of Human Resources. Summer, 1977.

Bishop, John. Preparing Youth for Employment. Columbus: The National Center for Research in Vocational Education, The Ohio State University, 1985.

Bishop, John. "The Recognition and Reward of Employee Performance." Journal of Labor Economics, October 1987

Bishop, John. "Is the Test Score Decline Responsible for the Productivity Growth Decline?" American Economic Review. (forthcoming).

Bishop, John and Griffin, Kelly. Recruitment, Training and Skills of Small Business Employees, (National Federation of Independent Business Foundation, Washington, DC, forthcoming).

Bowen, W. G. and Finegan, T. A. The Economics of Labor Force Participation. Princeton: Princeton University Press, 1969.

Corporation for Public Private Ventures. Summer Training and Education Program (STEP): Report on the 1987 Experience. Philadelphia, Pa: Corporation for Public Private Ventures, 1988.

Daymont, T. N. and Rumberger, R. W. (1982) "Job training in the schools." In Job Training for Youth, edited by R. Taylor, H. Rosen, and F. Pratzner. Columbus: The National Center for Research in Vocational Education, The Ohio State University.

Ehrenberg, R. G. and Marcus, A. "Minimum Wages and Teenagers' Enrollment and Employment Outcomes: A Multi-nomial Logit Model." Journal of Human Resources, Winter 1982.

Fischer, C. W.,; Filby, N. N.; Marliave, R. S.; Cahen, L. S.; Dishaw, N. N.; Moore, J. E., and Berliner, D. C. Teaching Behaviors, Academic Learning Time and Student Achievement: Final Report of Phase III-B. Technical Report V-I. San Francisco: Far West Laboratories, 1978.

Frederick, W. C. "The Use of Classroom Time in High Schools Above or Below the Median Reading Score." Urban Education 11, no. 4 (January 1977): 459-464.

Frederick, W.; Walberg, H.; and Rasher, S. "Time, Teacher Comments, and Achievement in Urban High Schools." Journal of Educational Research 73, no. 2 (November-December 1979): 63-65.

Freeman, Richard B. The Market for College-Trained Manpower: A Study in the Economics of Career Choice. Cambridge, MA: Harvard University Press, 1971.

Freeman, Richard. "A Cobweb Model of the Supply and Starting Salary of New Engineers." Industrial and Labor Relations Review, 29, January 1976a, pp. 236-248.

Freeman, Richard. The Overeducated American. New York: Academic Press, 1976b.

Friedman, Toby and Williams, E. Belvin. "Current Use of Tests for Employment." Ability Testing: Uses, Consequences, and Controversies, Part II: Documentation Section, edited by Alexandria K. Wigdor and Wendell R. Gardner. Washington, DC: National Academy Press, 1982, pg. 999-169.

Gardner, John A. Influence of High School Curriculum on Determinants of Labor Market Experience. Columbus: The National Center for Research in Vocational Education, The Ohio State University, 1982.

Ghiselli, Edwin E. "The Validity of Aptitude Tests in Personnel Selection." Personnel Psychology. 1973: 26, 461-477.

Goodlad, J. A Place Called School. New York: McGraw-Hill, 1983.

Griggs vs. Duke Power Company, 3 FEP 175 (1971).

Gustman, Alan L. and Pidot, Jr., George B. "Interactions Between Educational Spending and Student Enrollment." The Journal of Human Resources, 8, no. 1, Winter 1973, 3-23.

Gustman, Alan L. and Steinmeier, Thomas L. "The Relation Between Vocational Training in High School and Economic Outcomes." Paper prepared for the Division of Technical Systems in the Office of Technical and Analytic Systems, Office of the Assistant Secretary for Planning and Budget, U.S. Department of Education. Hanover, NH: Dartmouth College, July 1981.

Halasz, Ida M., And Behm, Karen S. "Time on Task Selected Vocational Education Classes." Columbus: The National Center for Reserach in Vocational Education, The Ohio State University, January 1983.

Hashimoto, M., and Yu, B. "Specific Capital, Employment and Wage Rigidity." Bell Journal of Economics, 11, no. 2, 1980: 536-549.

Hause, J. C. (1975) "Ability and schooling as determinants of lifetime earnings, or if you're so smart, why aren't you rich." In Education, Income, and Human Behavior, edited by F. T. Juster. New York: McGraw-Hill.

Hemenway, et al. Measures and Variables in the Sustaining Effects Study: Technical Report No. 9. Mountain View, California: RMC Research Corporation, 1978.

Heyns, Barbara. "Schooling and Cognitive Development: Is There a Season for Learning." Child Development, Vol. 58, No. 5, 1987, pp. 1151-1160.

Hollenbeck, K., and Smith B. The Influence of Applicants' Education and Skills on Employability Assessments by Employers. Columbus: The National Center for Research in Vocational Education, The Ohio State University, 1984.

Hotchkiss, Lawrence; Bishop, John H.; and Gardner, John. Effects of Individual and School Characteristics on Part-Time Work of High School Seniors. Columbus: The National Center for Research in Vocational Education, The Ohio State University, 1982.

Hotchkiss, Lawrence. Effects of Schooling on Cognitive, Attitudinal and Behavioral Outcomes. Columbus: The National Center for Research in Vocational Education, The Ohio State University, 1984.

Hunter, J. E. and Hunter, R. F. "The Validity and Utility of Alternative Predictors of Job Performance." Psychological Bulletin, 96, no. 1, 1984, pp. 72-98.

Hunter, John E.; Schmidt, Frank L. and Judiesch, Michael K. "Individual Differences in Output as a Function of Job Complexity." Department of Industrial Relations and Human Resources, University of Iowa, June 1988.

Jackson, G. A. and Weathersby, G. B. "Individual Demand for Higher Education." Journal of Higher Education, 46, Nov./Dec. 1975, pp. 623-52.

Jencks, Christopher and Crouse, James. "Aptitude vs. Achievement: Should We Replace the SAT?" The Public Interest, 1982.

Kang, S. and Bishop, J. "The impact of curriculum on the non-college bound youth's labor market outcomes." In High School Preparation for Employment, 95-135. Columbus: The National Center for Research in Vocational Education, The Ohio State University, 1984.

Klein, M F.; Tyle, K. A.; and Wright, J. E. "A Study of Schooling Curriculum." Phi Delta Kappan 61, no. 4 (December 1979):244-248.

Klein, Roger; Spady, Richard; and Weiss, Andrew. Factors Affecting the Output and Quit Propensities of Production Workers. New York: Bell Laboratories and Columbia University, 1983.

Klibanoff, L. S. and Haggart, S. A. Report No. 8: Summer Growth and the Effectiveness of Summer School. Technical Report prepared for the Office of Program Evaluation, U.S. Department of Education. Mountain View, California: RMC Research Corporation, 1981.

Koretz, Daniel, et. al. Trend in Educational Achievement. Produced by the Congressional Budget Office.

Krista. Paper for ILR 360, Cornell University, 1987.

Lazear, Edward P. "Pay Equality and Industrial Politics", The Hoover Institution, Stanford University, April 1986.

Leestma, Robert, et. al. "Japanese Education Today." A report from the U.S. Study of Education in Japan prepared by a special task force of the OERI Japan Study Team.

Lorge, Irving. "Schooling Makes a Difference." Teachers College Record, 1945 Vol. 46 p. 483-492.

McKinney, Floyd, et al. Factors Relating to the Job Placement of Former Secondary Vocational Educational Students. Columbus: The National Center for Research in Vocational Education, The Ohio State University, 1982.

Meyer, R. "Job Training in the Schools." In Job Training for Youth, edited by R. Taylor, H. Rosen, and F. Pratzner. Columbus: The National Center for Research in Vocational Education, The Ohio State University, 1982.

Organization of Economic Cooperation and Development. "Living Conditions in OECD Countries: A Compendium of Social Indicators." Social Policy Studies No. 3. Paris, France: Organization for Economic Co-Operation and Development, 1986.

Rosenfeld, Carl. "Job Seeking Methods Used by American Workers." Monthly Labor Review, 98, no. 8, 1975, pp. 39-42.

Reubens, Beatrice. From Learning to Earning: A Transnational Comparison of Transition Services. R&D Monograph 63, 1969, U.S. Department of Labor.

Rosenbaum, James and Kariya, Tobe. "Market and Institutional Mechanisms for the High School to Work Transition in Japan and the U.S. Paper given at the August 1987 American Sociological Association Meeting.

Sizer, Theodore R. Horace's Compromise: The Dilemma of the American High School. The First Report from A Study of High Schools, co-sponsored by the National Association of Secondary School Principals and the Commission on Educational Issues of the National Association of Independent Schools, Boston: Houghton Mifflin, 1984.

Slavin, Robert E. "When Does Cooperative Learning Increase Student Achievement?" Psychological Bulletin, 1985.

Stevenson, Stevenson; Lee, Shin-Ying and Stigler, James W. "Mathematics Achievement of Chinese, Japanese & American Children." Science, February 1986, pp. 693-699.

Stiglitz, Joseph E. "Risk Sharing and Incentives in Sharecropping." Review of Economic Studies, 61, no. 2 April 1974, 219-256.

Taubman, P. and Wales, T. "Education as an Investment and a Screening Device." In Education, Income, and Human Behavior, edited by F. T. Juster. New York: McGraw-Hill, 1975.

Tim. Paper for ILR 360. Cornell University, 1986.

Wegmann, R. G. "Job-Search Assistance: A Review." Journal of Employment Counseling, 16, 1979, pp. 197-228.